What is claimed is:

1. A surface-emitting laser diode comprising:

an active layer;

p-type and n-type material layers on opposite sides of the active layer;

a first distributed Bragg reflector (DBR) layer formed on the n-type material layer;

an n-type electrode connected to the active layer through the n-type material layer such that voltage is applied to the active layer for lasing;

a spacer formed on the p-type material layer with a laser output window in a portion aligned with the first DBR layer, the spacer being thick enough to enable holes to effectively migrate to a center portion of the active layer;

a second BDR layer formed on the laser output window; and

a p-type electrode connected to the active layer through the p-type material layer such that voltage is applied to the active layer for lasing.

2. The surface-emitting laser diode of claim 1, wherein the spacer has a protrusion portion, and the laser output window is formed on the top of the protrusion portion.

3. The surface-emitting laser diode of claim 2, wherein the p-type electrode is formed to surround the protrusion portion of the spacer.

4. The surface-emitting laser diode of claim 1, wherein the spacer comprises:

a first spacer formed on the p-type material layer; and

a second spacer formed on the first spacer on which the laser output window is formed and around which the p-type electrode is formed.

5. The surface-emitting laser diode of claim 4, wherein the second spacer has a protruded shape on which the laser output window is formed.

6. The surface-emitting laser diode of claim 1 or 4, wherein the laser output window is formed in a lens-like shape having a predetermined curvature to compensate for a drop in characteristics of a laser beam caused by the spacer.

7. The surface-emitting laser diode of claim 1, wherein the spacer is a p-type doped substrate or an undoped substrate.

8. The surface-emitting laser diode of claim 4, wherein one of the first and second spacers is a p-type doped substrate or an undoped substrate.

9. The surface-emitting laser diode of claim 1, wherein the n-type material layer comprises:

an n-type barrier layer formed on one side of the active layer; and

an n-type compound semiconductor layer formed on the n-type barrier layer.

10. The surface-emitting laser diode of claim 1 or 4, wherein the p-type material layer comprises:

a p-type barrier layer formed on the other side of the active layer; and

a p-type compound semiconductor layer formed on the p-type barrier layer.

11. A method for manufacturing a surface-emitting laser diode, the method comprising the steps of:

(a) sequentially forming a p-type material layer for lasing, an active layer, and an n-type material layer for lasing on a substrate;

(b) forming a first distributed Bragg reflector (DBR) on the n-type material layer, around which an n-type electrode is formed;

(c) forming a laser output window on a bottom surface of the substrate, the laser output window having a shape suitable for compensating for a drop in characteristics of a laser beam caused by the presence of the substrate;

(d) forming a p-type electrode on the bottom surface of the substrate to surround the laser output window; and

(e) forming a second DBR layer on the laser output window.

12. The method of claim 11, wherein step (b) comprises:

forming a conductive layer on the n-type material layer;

forming a mask pattern on the conductive layer to expose a portion of the conductive layer in which the first DBR layer is to be formed;

removing the portion of the conductive layer which is exposed through the mask pattern, using the mask pattern as an etch mask;

forming the first DBR layer on a portion of the n-type material layer from which the conductive layer is removed; and

removing the mask pattern.

13. The method of claim 11, wherein step (b) comprises:

forming the first DBR layer on the n-type material layer;

forming a mask pattern on the first DBR layer to expose a portion of the first DBR layer, in which the n-type electrode is to be formed;

removing the portion of the first DBR layer which is exposed through the mask pattern, using the mask pattern as an etch mask;

forming a conductive layer on a portion of the n-type material layer, from which the first DBR layer is removed; and

removing the mask pattern.

14. The method of claim 11, wherein step (c) comprises:

polishing the bottom surface of the substrate;

forming a mask pattern to cover a portion of the polished bottom surface of the substrate in which the laser output window is to be formed;

processing the mask pattern into a shape suitable for compensating for diffraction of the laser beam caused by the presence of the substrate; and

etching the bottom surface of the substrate on which the processed mask pattern is formed, by a predetermined thickness, to transfer the shape of the processed mask pattern to the bottom surface of the substrate.

15. The method of claim 11, wherein, in step (c), the laser output window is formed in a convex lens-like shape having a predetermined curvature suitable for compensating for diffraction of the laser beam.

16. The method of claim 14, wherein, in processing the mask pattern, the mask pattern is processed into a convex lens-like shape by reflowing, the convex lens-like shape having a predetermined curvature suitable for compensating for diffraction of the laser beam.

17. The method of claim 14, wherein the substrate is formed of multiple layers including a first substrate and a second substrate on the first substrate.

18. The method of claim 17, wherein etching the bottom surface of the substrate on which the processed mask pattern is formed is continued until the second substrate is exposed.

19. The method of claim 11 or 14, wherein the substrate is a p-type doped substrate or an undoped substrate.

20. The method of claim 17, wherein one of the first and second substrates is a p-type doped substrate or an undoped substrate.

21. The method of claim 17, wherein the first substrate is formed as a substrate on which a gallium nitride based material is grown and the second substrate is formed as a p-type spacer.

22. A method for manufacturing a surface-emitting laser diode, the method comprising the steps of:

(a) sequentially forming on a substrate an n-type material layer for lasing, an active layer, a p-type material layer for lasing, and a p-type spacer;

(b) forming a laser output window in a predetermined area of the p-type spacer;

(c) forming a p-type electrode on the p-type spacer to surround the laser output window;

(d) forming a first distributed Bragg reflector (DBR) layer on the laser output window;

(e) removing the substrate; and

(f) forming a second DBR layer on a predetermined portion of a bottom surface of the n-type material layer and forming an n-type electrode around the second DBR layer.

23. The method of claim 22, wherein the substrate is formed of an n-type substrate or a sapphire substrate and a gallium nitride based material is grown thereon.

24. The method of claim 22, wherein step (b) comprises:

forming a mask pattern to cover a portion of the p-type spacer in which the laser output window is to be formed;

processing the mask pattern into a shape suitable for compensating for diffraction of a laser beam caused by the presence of the p-type substrate; and

etching the entire surface of the p-type spacer on which the processed mask pattern is formed, by a predetermined thickness, to transfer the shape of the processed mask pattern to the p-type spacer.

25. The method of claim 24, wherein the laser output window is formed in a convex lens-like shape having a predetermined curvature suitable for compensating for diffraction of the laser beam.

26. The method of claim 24, wherein, in processing the mask pattern, the mask pattern is processed into a lens-like shape by reflowing, the lens-like shape having a predetermined curvature suitable for compensating for the diffraction of the laser beam.